

Water Innovation Challenge – Pure Water Demonstration Facility

Individual Reclaimed Water Permit No. R512402

Place ID No. 150824, LTF 67212

I. FACILITY INFORMATION

Name and Location

Name of Permittee:	Pima County Regional Wastewater Reclamation Department (Pima County RWRD)
Mailing Address:	2955 W. Calle Agua Nueva Tucson, Arizona 85745
Facility Name	Water Innovation Challenge Pure Water Demonstration Facility
Facility Location	This is a mobile facility; it will be parked at the Permittee address when not in use.

Regulatory Status

An Individual Reclaimed Water Permit was issued for the facility on June 8, 2017. An application to amend the permit was received on August 7, 2017. The purpose of this amendment is to make the following changes to the permit:

1. Clarify that the beer produced using Pure Water may be made available for tastings or sale at the participating breweries.
2. Require that the permittee provide information materials and end user training to brewery personnel prior to tastings or sale of beer at the participating breweries further facilitating consumer education about the origin and quality of the Pure Water processes.
3. Clarify that an initial validation must be conducted on the Pure Water for enteric virus, Cryptosporidium, and Giardia.
4. Require annual reporting for the maintenance of the mobile facility and the locations where Pure Water was produced and the mobile facility was present at outreach events.

Facility and Reuse Site Description

The reuse site consists of a mobile treatment facility which will receive Class A+ and B+ reclaimed water. The mobile facility will use a series of treatment components to provide advanced treatment to achieve a high purity water product (Pure Water). The treatment train for the mobile treatment facility includes ultrafiltration (UF), reverse osmosis (RO), an ultraviolet light advanced oxidation process (UV AOP), granular activated carbon (GAC) for hydrogen peroxide quenching, and an option for chlorination of the final product. The water

properly treated and produced by this facility is considered potable water that is safe and suitable for distribution for human consumption and is no longer considered reclaimed water.

The input source for the mobile treatment facility will be Class A+ reclaimed water from the Pima County Agua Nueva Water Reclamation facility (WRF) and the City of Flagstaff Rio de Flag WRF, and Class B+ reclaimed water from the City of Phoenix 23rd Avenue WRF. The WRFs are permitted through the ADEQ Aquifer Protection Permit (APP) program, conform to new facility Best Available Demonstrated Control Technology (BADCT), and comply with the treatment and testing requirements of their respective permits.

The Pure Water produced by the facility will be provided directly to local Arizona craft breweries to make beer. When the monitoring results demonstrate the Pure Water meets the limits set in the permit, beer produced using Pure Water may be made available for tastings and sale at the breweries, but not for distribution.

The Pure Water will also be delivered to a local water bottling facility to produce bottles containing the water. The bottled water product will be returned to the permittee.

These final beer and bottled water products will be provided at tasting events where attendees will be fully apprised of the production process using educational materials describing the origin and quality of water produced by the facility.

II. MONITORING AND REPORTING REQUIREMENTS

Reclaimed water monitoring shall be performed as specified in the APPs for the three WRFs supplying the reclaimed water and reported to ADEQ under those permits. In addition, this individual reclaimed permit requires monitoring of the water treated by the Pure Water Demonstration Facility to include sampling and analysis for Total coliform, E. Coli, inorganic parameters, volatile organic compounds, and synthetic organic compounds. The results of the sampling and analysis will be used by Pima County to evaluate the quality of the treated water. All sampling results will be available and will demonstrate that the water meets drinking water standards prior to the beer or water being served at the breweries and tasting events. The results will be reported to the Department and retained in the records at the facility.

III. ADMINISTRATIVE INFORMATION

Public Notice and Comment (A.A.C. R18-9-705(F)(1))

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft permit or other significant action with respect to a permit or application. This permit will be public noticed in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum of 30 calendars days for interested parties to respond in writing to ADEQ..

Public Hearing (A.A.C R18-9-705(2))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if the Director determines there is a significant amount of interest in a hearing expressed during the 30-day public comment period, or if significant new issues arise relevant to the permitting decision that were not considered during the permitting process.

IV. ADDITIONAL INFORMATION

Additional information relating to this permit may be obtained from:

Arizona Department of Environmental Quality
Water Quality Division – Groundwater Section
Attn: Maribeth Greenslade
1110 W. Washington Street, Mail Code: 5415B-3
Phoenix, Arizona 85007
Phone: (602) 771-4578